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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/732,705 12/11/00 KOYANO

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WASHINGTON DC 20037-3202

EXAMINER

GRIER, L

ART UNIT

PAPER NUMBER

2644

DATE MAILED:

05/08/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/732,705

Applicant(s)

KOYANO ET AL.

Examiner

Laura A Grier

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. **Claim 2** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. **Claim 2** recites the limitation "the integrated velocity signal" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claim 1** is rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al. (U. S. Patent No. 5588065).

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Regarding **claim 1**, Tanaka et al. (hereinafter, referred to as "Tanaka") discloses a bass reproduction speaker apparatus. Tanaka's disclosure comprises a speaker unit including a speaker; a detector and/or detection circuit for detecting a vibration of a moving system of the speaker unit (column 5, lines 8-12; column 13, lines 24-25 and 34-40 and figures 1-10, in particular figure 1) which is indicative of detecting the displacement/amplitude of a diaphragm; and adding means.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claim 1** is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama (U. S. Patent No. 5009280).

Regarding **claim 1**, Yokoyama discloses an acoustic apparatus. Yokoyama's disclosure comprises a resonator having a passive diaphragm (column 6, lines 52-54; column 15, lines 26-37 and 56-63; and figures 1 and 8), a motional signal detecting circuit for detecting the movement of the diaphragm such as velocity, deviation (amplitude and/or displacement), thus constituting as a amplitude detecting means. However, Yokoyama fails to specifically disclose an adding means in figure 8. The examiner maintains that such adding means are well known in the art.

Regarding the adding means, in another figure relevant to the invention of Yokoyama, he discloses an adding means (figure 4).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify Yokoyama's acoustic apparatus by substituting and/or incorporating an adding means instead a of subtracter (figure 8) for the purpose of adding the detected amplitude signal to the original driving signal for effectively driving the speaker to produce the desired characteristics of a speaker system.

9. **Claims 2-3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama in view of Klippel (U. S. Patent No. 5815585) in view of Kim et al. (U. S. Patent No. 5666427).

Regarding **claims 2-3**, Yokoyama discloses everything claimed as applied above (see claim 1). Yokoyama, further teaches detector means comprising a system of detecting (column 15, lines 31-37 and 56-63) indicative of a velocity detecting means. However, Yokoyama fails to specifically disclose an integrating means. The examiner maintains that such an integrating means was well known in the art.

Regarding the integrating means, in a similar field of endeavor, Klippel discloses an adaptive arrangement for correcting the transfer characteristic of an electrodynamic transducer without additional sensor. Klippel discloses in figure 8, an integrator (87) or a filter with low pass characteristics (column 7, lines 59-61) which is indicative of a LPF acting as an integrator.

Further, Kim et al. discloses a method and apparatus for controlling noise generated in confined spaces. Kim et al. teaches the combined connection of an integrated with a low pass filter processing a velocity signal (column 5, lines 11-17).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the acoustic apparatus of Yokoyama by implementing an integrator/low filter means as taught by Klippel for the purpose of integrating the velocity signal, wherein the filter process includes outputting low frequency components of the signal.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (703) 306-4819. The examiner can normally be reached on 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-6306 for regular communications and (703) 308-6306 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

LAG

April 25, 2001


FORESTER W. ISEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2700